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MPSA55 & MPSA56
Silicon PNP Transistor
General Purpose Amplifier

Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CES}
- MPSA55 . . . . . 60V
- MPSA56 . . . . . 80V

Collector–Base Voltage, V_{CBO}
- MPSA55 . . . . . 60V
- MPSA56 . . . . . 80V

Emitter–Base Voltage, V_{EBO} 4V
Continuous Collector Current, I_C 500mA
Total Device Dissipation (T_A = 25°C), P_D 625mW
- Derate Above 25°C . . . . . 5mW/°C

Total Device Dissipation (T_C = 25°C), P_D 1.5W
- Derate Above 25°C . . . . . 12mW/°C

Operating Junction Temperature Range, T_J . . . . . –55° to +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C
Thermal Resistance, Junction–to–Case, R_{qJC} . . . . . 83.3°C/W
Thermal Resistance, Junction–to–Ambient, R_{qJA} (Note 1) . . . . . 200°C/W

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector–Emitter Breakdown Voltage MPSA55	$V_{(BR)CEO}$	I_C = 1.0mA, I_B = 0, Note 2	60	–	–	V
MPSA56			80	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 100mA, I_C = 0	4.0	–	–	V
Collector Cutoff Current	I_{CES}	V_{CE} = 60V, I_B = 0	–	–	0.1	mA
Collector Cutoff Current MPSA55	I_{CBO}	V_{CB} = 60V, I_E = 0	–	–	0.1	mA
MPSA56		V_{CB} = 80V, I_E = 0	–	–	0.1	mA
ON Characteristics						
DC Current Gain	h_{FE}	V_{CE} = 1.0V, I_C = 10mA	100	–	–	
		V_{CE} = 1.0V, I_C = 100mA	100	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 100mA, I_B = 10mA	–	–	0.25	V
Base–Emitter Saturation Voltage	$V_{BE(on)}$	I_C = 100mA, V_{CE} = 1.0V	–	–	1.2	V

Note 1. R_{qJA} is measured with the device soldered into a typical printed circuit board.

Note 2. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.

Electrical Characteristics (Cont'd): (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Small Signal Characteristics						
Current Gain Bandwidth Product	f_t	I_C = 100mA, V_{CE} = 1V, f = 100Mhz, Note 3	50	–	–	MHz

Note 3. f_t is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.